

# A View of Asthma in Oregon

Volume I Issue 2

April 2002

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**NOTES:** This issue of *A View of Asthma in Oregon* focuses on disparities regarding asthma morbidity and mortality, rates of asthma hospitalization, and emergency department (ED) visits for asthma for African Americans. Currently, Oregon-specific data in these areas are limited, and therefore will not be presented in this report. Future issues will highlight Oregon data as they become available. Also, all rates are age-adjusted to the 2000 U.S. population.

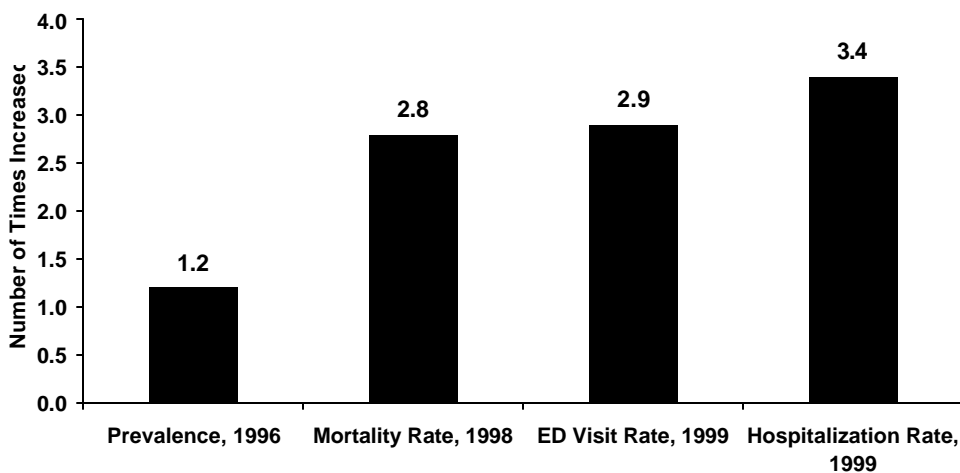
*Although African Americans are only slightly more likely than whites to have asthma, they are three times more likely to have uncontrolled asthma that results in emergency department visits, hospitalizations, and deaths.*

*These poor outcomes are avoidable. With proper diagnosis, treatment and self-management, almost everyone with asthma can lead active, productive lives.*

## Disparities in Asthma for African Americans

While asthma is a disease that affects people of all races and ethnicities, significant racial disparities exist regarding health care utilization for asthma and the most severe consequences of asthma, such as ED visits, hospitalizations and deaths.

**Figure 1. Risks of Asthma and Poor Asthma Outcomes, African Americans Compared to All Other Races\*, U.S.**



As illustrated in Figure 1, in 1996 African Americans in the United States had only slightly higher self-reported asthma prevalence than whites (6.6 percent versus 5.4 percent) [a]. However, in 1998 and 1999, rates of ED visits, hospitalization, and deaths for asthma among African Americans were several times greater than those of whites and persons of other races, and cannot be fully explained by the slight difference in self-reported prevalence [b].

Despite many studies attempting to explain racial trends observed in asthma morbidity, mortality and health care utilization, there remains much about racial disparities and asthma that is not fully understood.

\* Asthma prevalence and ED visit rate are compared to whites only.

Note: Comparison years are different due to shifts in how data were measured at different points in time.

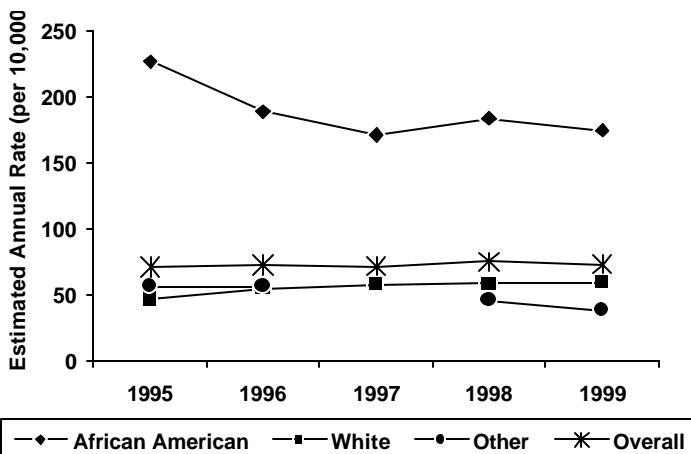
# Disparities in Asthma Hospitalizations and Emergency Department Visits for African Americans

Emergency department (ED) visits and hospitalizations for asthma may result when the disease is not properly controlled. In the U.S. in 1998, asthma resulted in 2 million ED visits, 423,000 hospitalizations, and accounted for estimated direct and indirect expenditures of more than \$12.7 billion [b,c,d]. Although African Americans report only slightly higher asthma prevalence, data concerning asthma ED visits and hospitalization suggest that African Americans are disproportionately affected by the most serious asthma outcomes.

## ED Visits for Asthma

African Americans have experienced a rate of ED visits for asthma nearly three or more times that of whites since the data began to be collected in the early 1990's (Figure 2). Interestingly, among African Americans, the relationship between race and increased rates of asthma hospitalization and ED visits is significantly stronger among males than females [g].

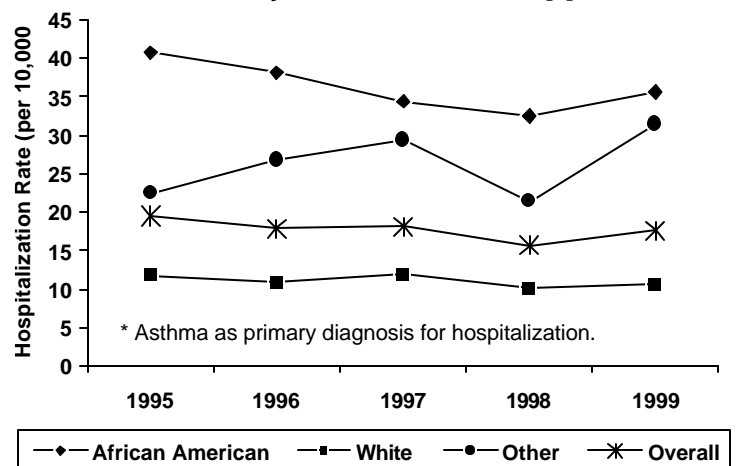
**Figure 2. Age-Adjusted Annual Rate of ED Visits for Asthma by Race: U.S., 1995-1999 [a]**



## Asthma Hospitalizations

The overall hospitalization rate for asthma increased 40 percent in the United States between 1970 and 1978, 20 percent between 1979 and 1987, and has been following a slow downward trend since. In 1999, however, the hospitalization rate for asthma among African Americans in the United States was more than three times that of whites, (35.6 per 10,000 versus 10.6 per 10,000) and somewhat greater than that of persons of other races (31.5 per 10,000) (Figure 3). These data should be considered with caution due to the high percent of hospital discharges (14 percent) that did not include information about patient race. It is important to note though that this trend has been observed for several decades [b].

**Figure 3. Age-Adjusted Hospitalization Rate for Asthma\* by Race: U.S., 1995-1999 [a]**



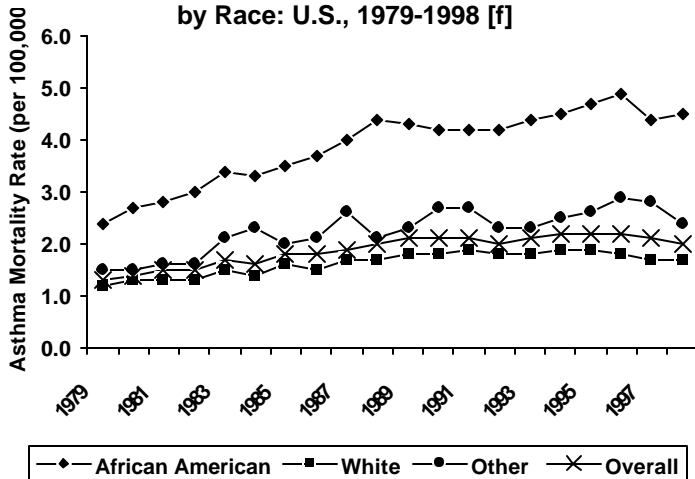
## Disparities in Asthma Mortality for African Americans

Most asthma deaths can be prevented with quality medical care, use of the correct prescription medications, and adherence to treatment plans. Despite this, 5,438 people in the United States died from asthma in 1998, including 96 in Oregon.

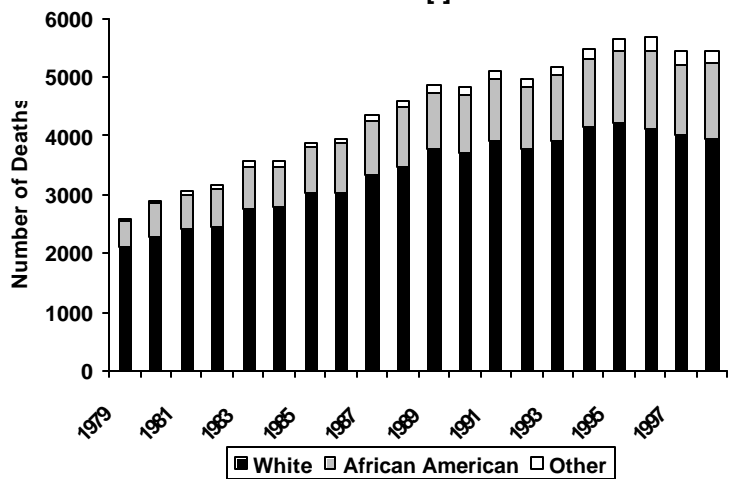
The age-adjusted asthma mortality rate has been steadily increasing for all races since 1979 (Figure 4). Between 1979 and 1998, the age-adjusted asthma mortality rate increased by 42 percent in whites, 88 percent in African Americans, and 60 percent in persons of other races. By 1998, the mortality rate for asthma in African Americans was more than two and a half times that of whites (4.5 per 100,000 versus 1.7 per 100,000) [f].

The total number of annual asthma deaths in the United States increased dramatically between 1979 and 1998. For all races, asthma deaths increased by more than 109 percent (from 2,598 to 5,438 annual asthma deaths) (Figure 5). As a group, African Americans had the highest percent increase. Between 1979 and 1998 asthma deaths among African Americans increased 174 percent (from 470 to 1,290 annual asthma deaths). In addition, although African Americans comprise only 12.3 percent of the U.S. population, more than 23 percent of those deaths resulting from asthma in 1998 were among African Americans [b].

**Figure 4. Age-Adjusted Asthma Mortality Rate by Race: U.S., 1979-1998 [f]**



**Figure 5. Asthma Deaths by Race: U.S., 1979-1998 [f]**



## Addressing Disparities in Asthma for African Americans

Much research has focused on the cause of these disparities. Recent studies have suggested that African Americans have higher rates of hospitalizations and ED visits for asthma even when controlling for income, access to health care, living conditions, and other unequal circumstances that African Americans in this country may experience. One explanation may be that asthma is more severe in African Americans [h]. Another plausible explanation is that African Americans are less likely to receive care consistent with those recommended in the National Asthma Education and Prevention Program's *Guidelines for the Diagnosis and Management of Asthma* [i,j]. For instance, it has been shown that African Americans use "rescue" (bronchodilator) medications at similar rates as whites. However, they are less likely than whites to use "controller" (corticosteroid) medications [g], which are the most effective asthma therapy for those with persistent asthma.

All of this research points out that the best way to help eliminate disparities in asthma for African Americans, and indeed improve asthma outcomes for everyone, is to promote the consistency and equity of care through evidence-based guidelines. This mirrors a key recommendation of the recently published Institute of Medicine report *Unequal Treatment: Confronting Racial And Ethnic Disparities in Health Care* [k]. In Oregon, a group of asthma experts has condensed the NAEPP Guidelines into eight key indicators of quality asthma care in the *Guide to Improving Asthma Care in Oregon* [l]. In 2002 one of the cornerstone activities of the Oregon Asthma Program will be developing provider toolkits and patient education materials to ensure the successful implementation of this Guide for all Oregonians with asthma. For more information, contact the Oregon Asthma Program at (503) 731-4025.

## Article References

Listed below are the primary sources used for this issue of "A View of Asthma in Oregon." If you would like information on additional sources regarding racial disparities in asthma morbidity and mortality, please contact the Oregon Asthma Program.

- [a] Mannino DM, Homa DM, Akinbami LJ, et al. 2002, "Surveillance for asthma – United States, 1980-1999", *MMWR*, vol. 51, no. SS-1, pp. 1-13.
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- [i] Krishnan JA, Diette GB, Skinner EA et al. 2001, "Race and Sex Differences in Consistency of Care With National Asthma Guidelines in Managed Care Organizations", *Arch Intern Med*, vol. 161, pp. 1660-1667.
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- [l] Oregon Asthma Program 2001, *Guide to Improving Asthma Care in Oregon: Indicators for Quality Care in Health Systems*, Available: <http://www.ohd.hr.state.or.us/asthma/guideor.htm>.

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## OREGON ASTHMA PROGRAM

Department of Human Services  
800 NE Oregon Street, Suite 772  
Portland, OR 97232  
Website: [www.oshd.org/asthma/](http://www.oshd.org/asthma/)  
E-mail: [asthma.ohd@state.or.us](mailto:asthma.ohd@state.or.us)



**If you need this material in an alternate format, please call the Oregon Asthma Program at (503) 731-4025.**



**Don't forget to mark your calendar!**  
**May 7, 2002 – World Asthma Day**  
**June 20, 2002 – 3<sup>rd</sup> Annual Oregon Asthma Network Meeting**  
**Details to follow**

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